HERCULANEUM LEAD SMELTER SITE

;y and environment. inc.

3UILDING 3, 6405 METCALF, OVERLAND PARK, KANSAS 66202, TEL. 913 432-9961

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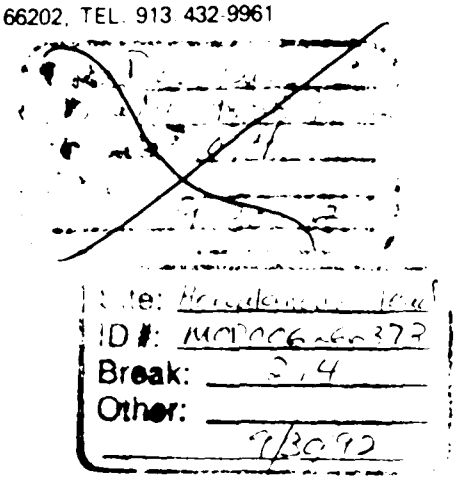


A217

MEMORANDUM

TO: 'aul Doherty, EPA/DPO

'oe Parish, E & E/TATM Dave Tyson for JP

THRU: Joe Chandler, E & E/TATL JC

DATE: September 30, 1992

SUBJECT: SPCC Plan Review and SPCC Inspection; Doe Run Company, 881 Main St., Herculaneum, Missouri
TDD#: T07-9206-040A
PAN#: EMOZ164CAA
EPA/OSC: Paul Doherty

S00216416
SUPERFUND RECORDS

INTRODUCTION

The Ecology & Environment, Inc., Technical Assistance Team (TAT) was tasked by the U.S. Environmental Protection Agency (EPA) Emergency Planning and Response (EP&R) Branch to conduct a Spill Prevention Control and Countermeasure (SPCC) inspection and plan review at the Doe Run Company, 881 Main Street, Herculaneum, Missouri. TAT members (TATMs) Kathleen Wright and Joseph Parish performed the inspection on September 24, 1992.

INSPECTION ACTIVITIES AND PLAN REVIEW

On September 24, TATMs Parish and Wright met with Daniel L. Vornberg, the environmental manager of the site, to conduct an SPCC inspection in compliance with the Oil Pollution Prevention regulations [40 CFR, Part 112] at the Doe Run Company, Smelting Facility, 881 Main Street, Herculaneum, Missouri. Wright and Parish reviewed the SPCC plan and inspected the facility and both were found to be deficient. The deficiencies are noted below.

The facility is located at the confluence of Joachim Creek and the Mississippi River. The company operates a large lead smelting plant at this location. The company stores over 15,000 gallons of diesel fuel and approximately 450 gallons of gasoline, which are used to run the locomotive and heavy equipment of the operation.

SPCC PLAN REVIEW

The inspection of the SPCC plan revealed the following deficiencies (with the corresponding reference in the regulations):

1. The plan inadequately addresses the spill history [112.7(a)].

2. The facility's drainage is inadequately addressed. There is no mention of drainage retention by valves, catchment basins, or return systems [112.7(e)(1)(i-iv)].

3. The facility's bulk storage tanks are inadequately addressed. The plan does not mention the use of high level alarms, high level cut-off, audible or code warning, level sensing devices, or direct read-out devices as they apply to the inspection or regular testing [112.7(e)(2)(viii)] (items A through E).

4. Regular inspections of the site disposal facilities are not addressed [112.7(e)(2)(ix)].

5. The facility transfer operations are inadequately addressed. There is no mention of warning signs for trucks in the plan to prevent accidental pipe or tank damage [112.7(e)(3)(v)].

6. The plan does not address inspection procedures for drainage ditches and/or dikes as applicable [112.7(e)(5)(ii)].

7. The plan does not adequately address facility security. Security locking of master flow/drain valves is not adequately addressed, nor are non-operational pipes being drained and blank-flanged [112.7(e)(9)(ii,iv)].

SPCC FACILITY INSPECTION

The inspection of the Doe Run Company facility revealed the following deficiencies:

1. Tanks at present are not tested regularly for structural integrity, though the company has the capability to do this [112.7(e)(2)(vi)].

2. The facility transfer operations are inadequate. Piping used to service the large capacity diesel tank (12,000 gallons) appears to be inadequately supported [112.7(e)(3)(iii)]. There are no regular inspections of valves and pipes [112.7(e)(3)(iv)]. There are no warning signs for vehicular traffic at any of the tank locations [112.7(e)(3)(v)].

3. The loading/unloading procedures are inadequate. There is no secondary containment for the unloading/loading facility [112.7(e)(4)(iii)]. However, it appears that any spill would drain into the waste-water treatment facility from the tank areas.

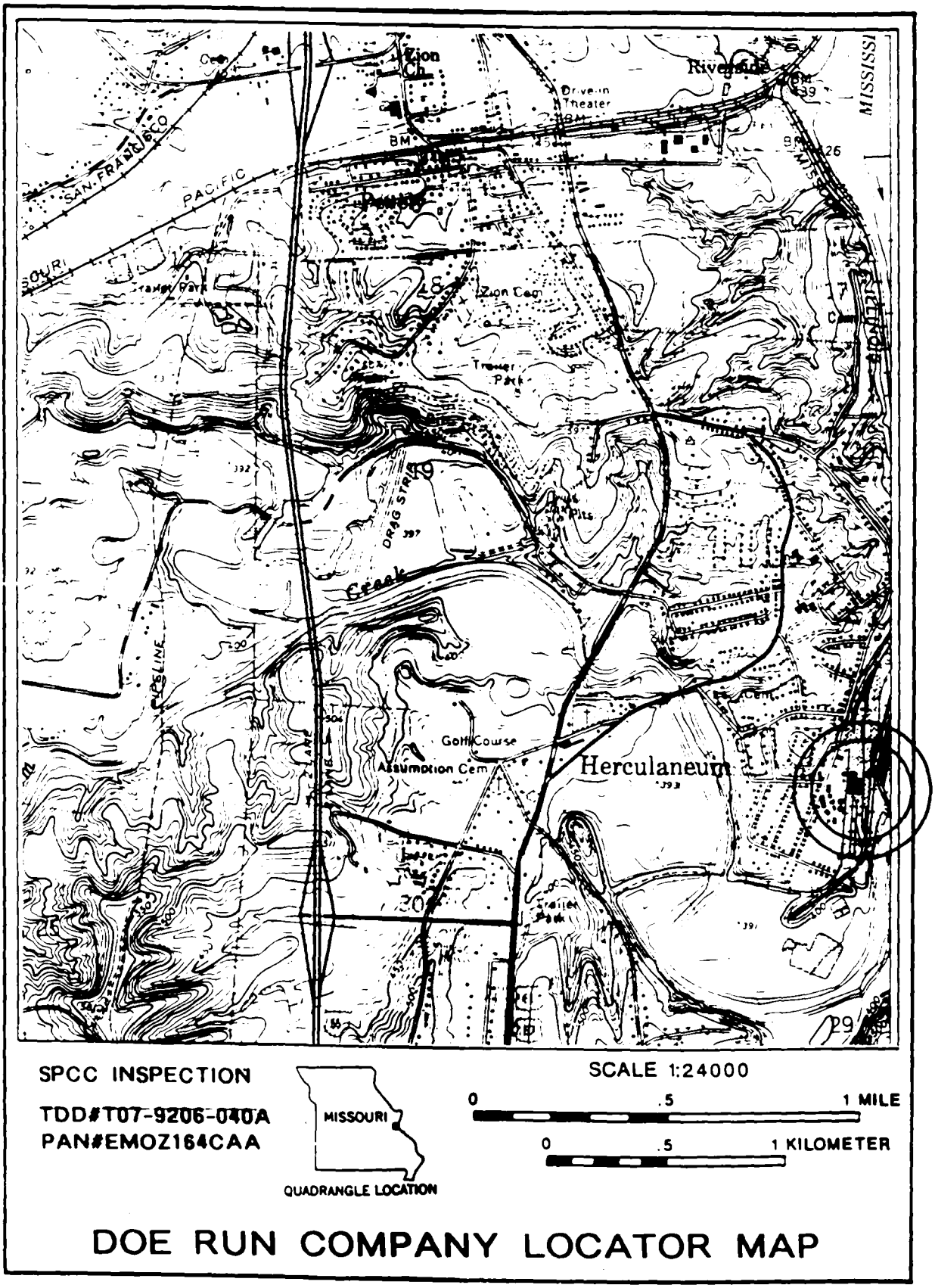
4. There were no inspection records kept, though this is in policy at present [112.7(e)(8)].

5. The flow valves and starter controls are not locked, but the tanks are in operation 24 hours a day [112.7(e)(1)(ii-v)].

Overall, the facility was in satisfactory condition as relates to the oil bulk storage facilities, with an exception of the deficiencies listed above. Secondary containment for the smaller tanks may not be adequate and should be inspected.

ATTACHMENTS

Site Location Map
SPCC Plan Inspection Form
SPCC Facility Inspection Form



DOE RUN COMPANY LOCATOR MAP

SPCC Plan Review Form (9/90)

Facility Name: Coe Farm, Co.

Reviewed by: Kathleen Wright Date of Review: 9/24/92

Indicate whether item is adequately addressed (+), inadequately addressed (-), not addressed (0) or is not applicable (NA).

+ PE Certification [112.3(d)] David J. Bailey PE-027714-E

+ Management Approval [112.7]

[redacted] Spill History [112.7(a)] Need to state yes or no

+ Spill Prediction [112.7(b)]

+ Secondary Containment [112.7(c)] double wall tanks Catchment basin

+ Contingency Plan [112.7(d)] Chrisses Communication Plan

Facility Drainage [112.7(e)(1)(i-v)]

N/A Drainage retained by valves (i)
— Valves are manual; open and close - not flapper type (ii)
+ Drainage from undiked areas flows into catchment basins. (iii)
N/A Return system, if necessary (iv)
+ Lift stations used as necessary (v)

Bulk Storage Tanks [112.7(e)(2)(i-xi)]

+ Tanks are compatible with material stored (i)
+ Secondary containment holds largest tank + 10% (ii) double wall tank Catchment basin
+ Rainwater empties into waterway (iii)
N/A Buried tanks protected against corrosion (iv)
N/A Use of partially buried tanks (v)
+ Regular testing of aboveground tanks (vi)
N/A Use of internal coils (vii)
— Tanks are kept up-to-date: (viii)
0 High level alarms (A)
0 High level pump cut-off (B)
0 Audible or code warning (C)
0 Level sensing devices tested regularly (D)
0 Direct readout of devices (E)

O Site disposal facilities inspected regularly (NPDES) (ix)
✓ Correction of observed oil leaks (x)
N/A Portable storage tanks properly positioned (xi)

Facility Transfer Operations [112.7(e)(3)(i-v)]

N/A Buried piping protectively wrapped, cathodically protected (i)
N/A Out of service pipes are capped (ii)
N/A Pipe supports used where necessary (iii)
✓ Inspection of aboveground pipes (iv)
✓ Warning signs for trucks (clearance, etc.) (v)

Facility Loading/Unloading Operations [112.7(e)(4)(i-iv)]

✓ Follows DOT procedures (i)
✓ System holds maximum capacity of largest compartment in truck (ii)
✓ Vehicles are examined before leaving facility (iii)
✓ Bottom drain of vehicle examined before leaving (iv)

Oil Production Facilities [112.7(e)(5)(ii-iv)]

N/A Tank batteries containment area drain valves are closed, rainwater is inspected prior to discharge (ii)(A)
O Field drainage ditches and dikes inspected (ii)(B)
✓ Tanks are compatible with material stored (iii)(A)
✓ Secondary containment used as feasible (iii)(B)
✓ Visual inspection of tanks containing oil (iii)(C)
✓ New and old tank batteries kept up to date (iii)(D)
✓ Valves and pipelines inspected regularly (iv)(A)
N/A Salt water disposal facilities inspected regularly (iv)(B)
✓ Flowline maintenance to prevent spills (iv)(C)

Oil Drilling and Workover Facilities [112.7(e)(6)(i-iii)]

N/A Proper positioning of drilling equipment (i)
N/A Catchment basins or diversion structures

used as needed (ii)

N/A Blow-out prevention and well control (iii)

Oil Drilling, Production and Workover Facilities [112.7(e)(7)(ii-xvii)]

N/A

___ Oil drainage collection (ii)
___ Adequate sumps and drains (iii)
___ Separators equipped with high level alarm (iv)
___ Surge tanks " " " " " (v)
___ Pressure tanks equipped with high and low level alarms (vi)
___ Corrosion protection for tanks (vii)
___ Written procedure pollution control systems (viii)
___ Equipment testing conducted (ix)
___ Description of well valve controls (x)
___ BOP assembly and well control system (xi)
___ Well control measures for emergency situations (xii)
___ Written instructions for contractors/subcontractors (xiii)
___ Manifolds equipped with check valves (xiv)
___ Pressure sensing devices for necessary flowlines (xv)
___ Pipelines protected from corrosion (xvi)
___ Sub-marine pipelines inspected regularly (xvii)

Inspection and Records [112.7(e)(8)]

+ Should be kept for three years

Security [112.7(e)(9)(i-v)]

+ Fencing (i)
= Master flow/drain valves locked in closed position (ii)
N/A Starter control locked in off position (iii)
___ Pipelines not in use drained and blank-flanged (iv)
+ Facility well-lit (v)

Personnel Training [112.3(e)(10)(i-iii)]

+ Personnel properly instructed (i)
+ One person designated for spill prevention (ii)
+ Owner schedules training (iii)

SPCC FACILITY INSPECTION FORM (1/91)

Case Number: _____

Inspection date: 9/24/92 Inspector(s): J. Parish + K. Wright

Facility name and location: The Doe Run Company, melting division
881 Main St., Herculaneum, Mo 63048 314-479-5311
office 933-3134

Facility owner, address and telephone: Doe Run Company, subsidiary, full ownership. independently owned.
as above

Facility operator, address and telephone: Gary E. Boyer, V.P. + general Manager smelting
as above.

Can a release impact a waterway - describe (give name of waterway): Mississippi River, Joachim Creek confluence.

Facility storage:

# of tanks	Capacity	Material Stored
1	12000gal	diesel locomotive.
2	300gal	diesel heavy equip
1	150gal	gasoline.

(other tanks listed per attachment mailed later)

Is the facility subject to 40 CFR 112? Yes.

Does the facility have an SPCC Plan? [112.3] Yes

Is the plan certified by a Professional Engineer?

Name of P.E.: David Bailey.

Registration #: PE-027714-E

Facility History - have there been spills or prior inspections?
20gal release reported earlier this year, no oil spill in 12 yrs.

Inspection Purpose (what initiated the inspection)

random check

Secondary Containment

Containment volume [112.7(c) or 112.7(e)(2)(ii)]:
no dike, large diesel tank; double [illegible], drain towards berm (and tank under construction)

Does a contingency plan exist:

Describe drainage control [112.7(e)(1)(i-v)].
N/A, no dike, drainage to catchment basin under construction.

Is discharged rainwater inspected?
at Water [illegible] facility; visual

Storage Tanks

Compatible construction [112.7(e)(2)(i)]: steel, gas.

Corrosion protection for buried tanks [112.7(e)(2)(iv)]:
N/A

Partially buried tanks present (should be corrosion protected) [112.7(e)(2)(v)]: NO

Tanks tested for structural integrity [112.7(e)(2)(vi)]:
structural testing for [illegible] wall integrity; leased tanks from Bauman Oil.

Fail-safe engineering for tanks (should have direct read-out gauges at a minimum) [112.7(e)(2)(viii)].
- large tank has pressure gauge
- 300 diesel + 150 gas - no [illegible] spill would rupture into drain to waste water treatment facility
- 300 gal diesel - drain into concrete tank septors into treatment system

Facility NPDES permit:
not allowed oil discharge, [illegible] for NPDES for other chemicals.
pump well into barrels

Facility Transfer Operations

Buried piping corrosion protected [112.7(e)(3)(i)]: NA

Out-of-service pipes capped/blank flanged [112.7(e)(3)(ii)]: NA

Pipe supports used (indicate if needed) [112.7(e)(3)(iii)]: [illegible]
- two supports per tank, doesn't appear adequate

Inspection procedures for valves and pipes [112.7(e)(3)(iv)]: [illegible] rare, usually inspected after large tank construction

Are warning signs for vehicular traffic present [112.7(e)(3)(v)]?
use blue flags, NA? use gang plank over locomotive to fill.
- concrete bloch at the tanks
drivers fill themself up at small tanks

Facility Loading/Unloading Operations

Loading/unloading procedures meet DOT regulations [112.7(e)(4)(i)]: stipulated in plan.

Secondary containment for vehicles adequate [112.7(e)(4)(ii)]: No secondary containment.

Warning/barrier system for vehicles [112.7(e)(4)(iii)]: locomotive - driver fills tanks at small tanks, radio communication, use chalk for wheels on locomotive, backhand fills chalk & turn brake system.

Vehicles examined before leaving [112.7(e)(4)(iv)]: checked at beginning for safety, visual inspection

Inspections/recordkeeping

Facility inspection procedures: visual

Length of time records kept for (must be 3 years) [112.7(e)(8)]: in policy now.

Site Security

Fencing [112.7(e)(9)(i)]: around whole facility, security guards.

Flow valves locked [112.7(e)(9)(ii)]: 24 hours a day.

Starter controls locked [112.7(e)(9)(iii)]:

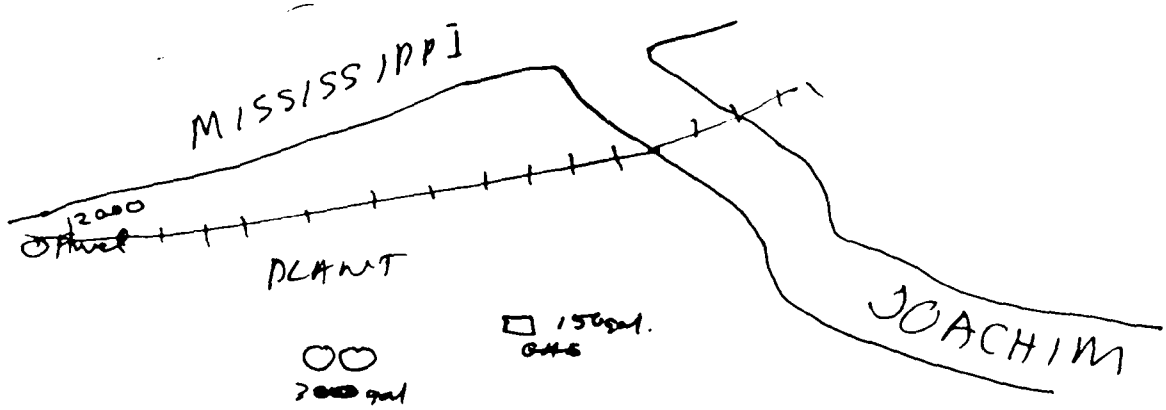
Lights [112.7(e)(9)(v)]: large tank - yes; small tanks used at night are lighted

List spill control equipment at facility:

environmental - engineering bldg.
- boom
- pads
- floating pump for skimming.

Additional Comments:
(Discuss facility appearance, general comments and inspection findings.)

lead smelting operation, sulfuric acid that is bagged out, oxidize, reduce, purify.
ore concentrate comes in by train.
- Diesel fuel for trains, propane fuel, just auxiliary, not part of operation.
- sell waste oil to recycling.
- Daniel Vornberg, Environmental Manager took TAT around plant.



List of attachments

Signature of Inspector

9/24/92
Date

9/25/92

DAN:

DIESEL TANKS & GAS TANKS
BELONG TO BAUMANN OIL

THEY ARE NOT DOUBLE WALL

DIESEL TANK	— SLAG HILL	300 GLS.
"	" — GARAGE	560 "
GAS TANK	— "	300 GLS.

DOUBLE WALL TANKS CANNOT BE MOUNTED
ON STANDS.

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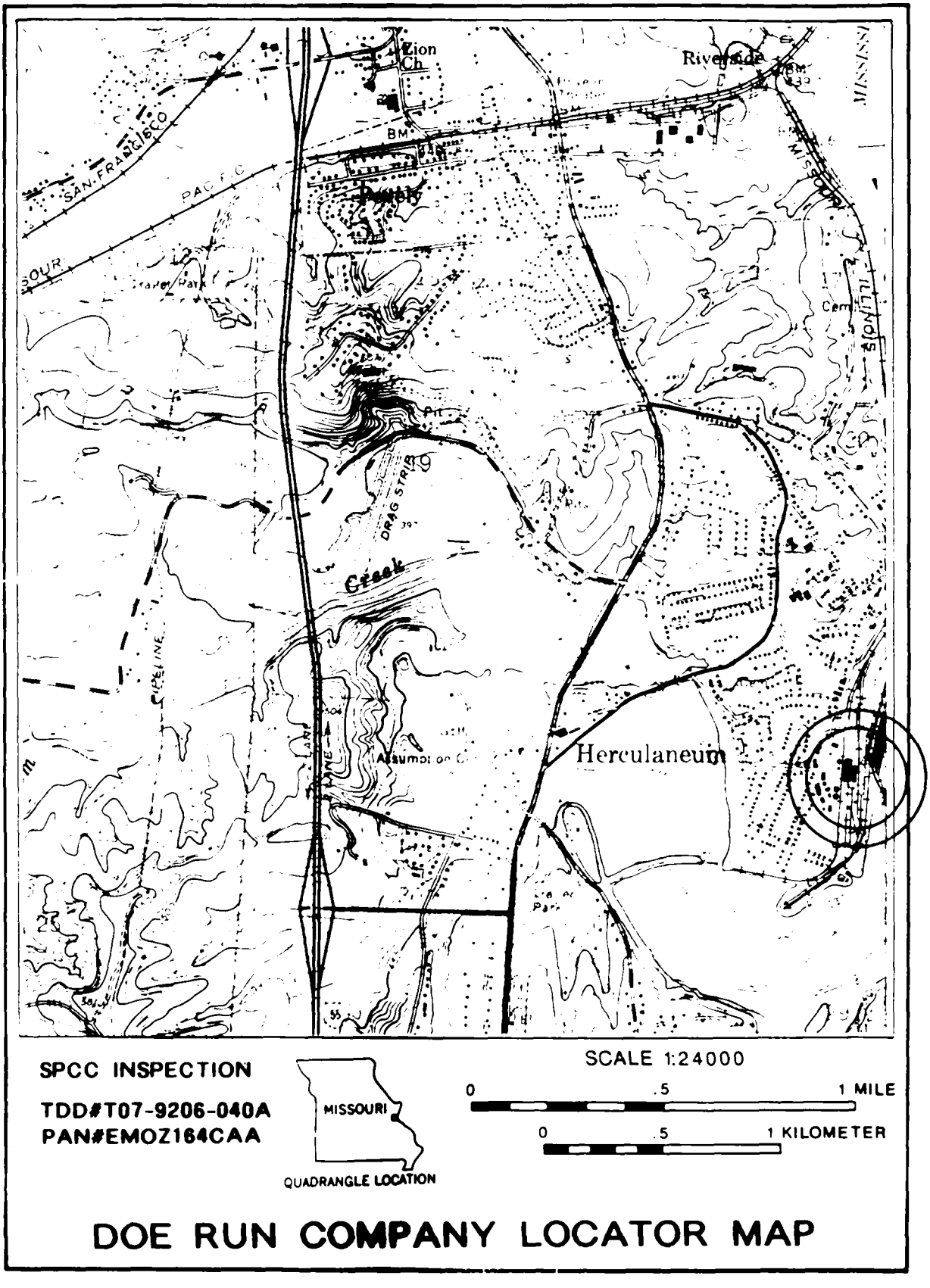

SPCC INSPECTION

TDD#T07-9206-040A
PAN#EMOZ164CAA

DOE RUN COMPANY LOCATOR MAP